



Intermediate Excel Lookup Functions

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About the speaker:

David H. Ringstrom, CPA, is an author and nationally recognized instructor who teaches scores of webinars each year. His Excel courses are based on over 25 years of consulting and teaching experience. His mantra is “Either you work Excel, or it works you.” David offers spreadsheet and database consulting services nationwide.



Excel Versions

I'll be teaching from the Microsoft 365 version of Excel, and noting any differences or limitations in the legacy versions of Excel. References to Excel 2013+, Excel 2016+, and so on mean a feature is available in all subsequent versions, including Microsoft 365.

The Future of Excel

Microsoft 365 (Formerly Office 365)

Subscription-based version of Microsoft Office, which includes Excel. Use the software on multiple devices, new calculation engine, services and more features are rolling out that will dramatically set this version apart from past Excel versions.
www.microsoft365.com

Legacy Versions

Perpetual Licenses

Pay once for the software to use on a single computer. No new features added until you buy a new license. Includes

Excel 2019
Excel 2016
Excel 2013
Excel 2010
Excel 2007 and earlier

1 File Home Insert Page Layout

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Calibri

B I U

I demonstrate each technique at least twice, first by way of numbered steps in PowerPoint, and then in Excel.

The following articles written by David Ringstrom include PDF of today's presentation along with an example workbook that contains most examples I'll teach from as well as related articles.

Email ask@davidringstrom.com if you haven't received the handouts.

Excel Tips, Data Entry Shortcuts

Related Articles Car Payme



VLOOKUP Introduction

	A	B	C	D	E	F	G	H	I
1	VLOOKUP	March		Account #	Account Name	January	February	March	April
2	40100	92,741		40100	Product Sales	99,738	113,689	92,741	109,467
3	40100	92,741		40200	Services	32,914	37,517	30,605	36,124
4				40300	Other Income	19,948	22,738	18,548	21,893
5				40400	Interest Income	2,992	5,684	3,710	3,284
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

=H2

=VLOOKUP(A3,D1:H5,5,FALSE)

=VLOOKUP(A3,D1:H5,5,FALSE)

lookup_value A3 what to look for <i>(in this case, account 40100)</i>	table_array D1:H5 cell coordinates of our list	col_index_num 5 column from which to return data	[range_lookup] FALSE type of match 0 or FALSE: exact match 1 or TRUE: approximate match
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VLOOKUP-Introduction



VLOOKUP - Approximate Match

	A	B	C	D	E	F	G	H	I
1	2017 Income Tax Rates								
2	Single	Married-Joint	Head of Household	Tax Rate					
3	0	0	0	10.0%	Income		9,325		
4	9,325	18,650	13,350	15.0%	Single		15.0%	=VLOOKUP(G3,A3:D9,4,TRUE)	
5	37,950	75,900	50,800	25.0%	Married-Joint		10.0%	=VLOOKUP(G3,B3:D9,3,1)	
6	91,900	153,100	131,200	28.0%	Head of Household		10.0%	=VLOOKUP(G3,C3:D9,2)	
7	191,650	23,350	212,500	33.0%					
8	416,700	416,700	416,700	35.0%					
9	418,400	470,700	444,500	39.6%					
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									

=VLOOKUP(G3,A3:D9,4,TRUE)

lookup_value G3 what to look for <i>(in this case an income amount)</i>	table_array A3:D9 cell coordinates of our list	col_index_num 4 column to return data from	[range_lookup] TRUE 0 or FALSE: Exact Match 1 or TRUE: Approximate Match <i>(you can also omit this argument but doing so can be risky)</i>
--	--	--	---

VLOOKUP-Approximate Match



HLOOKUP Introduction

	A	B	C	D	E	F	G	H
1		March		Account #	Account Name	January	February	March
2	40300	18,548		40100	Product Sales	99,738	113,689	92,741
3	40100	92,741		40200	Services	32,914	37,517	30,605
4				40300	Other Income	19,948	22,738	18,548
5				40400	Interest Income	2,992	5,684	3,710
6				=VLOOKUP(A2,D1:H5,5,FALSE)				
7				=HLOOKUP(B1,D1:Q5,2,FALSE)				
8								
9								
10				=HLOOKUP(B1,D1:Q5,2,FALSE)				
11								
12								
13								
14								
15								

lookup_value
B1
what to look for
(in this case
March)

table_array
D1:Q5
cell coordinates
of our list

row_index_num
2
row to return
data from

[range_lookup]
FALSE
type of match
0 or FALSE = Exact Match
1 or TRUE = Approximate Match

HLOOKUP-Introduction



LOOKUP Introduction

	A	B	C	D	E	F	G	H	
1	LOOKUP	March		Account #	Account Name	January	February	March	
2	40100	92,741		40100	Product Sales	99,738	113,689	92,741	1
3	40100	92,741		40200	Services	32,914	37,517	30,605	
4				40300	Other Income	19,948	22,738	18,548	
				40400	Interest Income	2,992	5,684	3,710	

Risks: Lookup_vector must be sorted in ascending order, returns approximate match if an exact match cannot be made.

=VLOOKUP(A2,D1:H5,5,0)

=LOOKUP(A3,D1:D5,H1:H5)

=LOOKUP(A3,D1:D5,H1:H5)

lookup_value A3 what to look for <i>(in this case account 40100)</i>	lookup_vector D1:D5 range to search for lookup_value	result_vector H1:H5 range to return data from
---	---	--

LOOKUP-Introduction



VLOOKUP Blank Cells Trigger #N/A

	A	B	C	D	E	F	G	H
1	VLOOKUP	March		Account #	Account Name	January	February	March
2	40500	#N/A		40100	Product Sales	99,738	113,689	92,741
3		#N/A		40200	Services	32,914	37,517	30,605
4	Items that don't appear in the first column of the table_array as well as blank cells cause VLOOKUP to return #N/A.			40300	Other Income	19,948	22,738	18,548
5				40400	Interest Income	2,992	5,684	3,710
6								
7				=VLOOKUP(A2,\$D\$1:\$H\$5,5,0)				
8				=VLOOKUP(A3,\$D\$1:\$H\$5,5,0)				
9								
10	=VLOOKUP(A3,\$D\$1:\$H\$6,5,0)							
11	lookup_value			table_array		col_index_num		[range_lookup]
12	A3			\$D\$1:\$H\$6		5		0 (zero)
13	what to look for (in this case, cell A3 is blank)			cell coordinates of our list		column from which to return data		0 or FALSE: exact match 1 or TRUE: approximate match
14								
	VLOOKUP-#NA ERROR							



VLOOKUP - Data Validation

1 Select the cell(s) you wish to apply Data Validation to.

=VLOOKUP(A2,D1:H5,5,FALSE)

VLOOKUP-Data Validation

Data Validation

Settings | Input Message | Error Alert

Validation criteria

Allow: List

Data: between

Source: =D\$2:D\$5

Ignore blank

In-cell dropdown

Data Validation

Settings | Input Message | Error Alert

Show error alert after invalid data is entered

When user enters invalid data, show this error alert:

Style: Stop

Title: Invalid Input

Error message: You must choose an account from the list.

Clear All

OK

Choose Data Validation from the Data menu.

2

	N	O	P	Q
ust	September	October	November	December
216	101,090	109,768	96,659	93,772
741	33,360	36,223	31,897	30,945

Data Validation

Settings | Input Message | Error Alert

Show input message when cell is selected

When cell is selected, show this input message:

Title: Account Number

Input message: Choose an account number from the list.

12

Account Number Choose an account number from the list.

=VLOOKUP(A2,D1:H5,5,FALSE)

VLOOKUP-Data Validation



VLOOKUP Deleting Columns Causes #REF!

	A	B	C	D	E	F	G	H
1		March		Account #	Account Name	January	February	March
2	40100	92,741		40100	Product Sales	99,738	113,689	92,741
3	40100	#REF!		40200	Services	32,914	37,517	30,605
4				40300	Other Income	19,948	22,738	18,548
5				40400	Interest Income	2,992	5,684	3,710
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

VLOOKUP returns #REF!
when the col_index_number is incorrect. This can also occur when a user deletes a column from the

=VLOOKUP(A2,\$D\$1:\$H\$5,5,FALSE)

=VLOOKUP(A3,\$D\$1:\$H\$5,6,FALSE)

=VLOOKUP(A3,\$D\$1:\$H\$5,6,0)

lookup_value A3 what to look for <i>(in this case, account 40100)</i>	table_array \$D\$1:\$H\$5 cell coordinates of our list	col_index_num 6 (in this case the formula incorrectly refers to the 6th column of a 5 column range)	range_lookup 0 0 or FALSE: exact match 1 or TRUE: approximate match
--	--	---	--

VLOOKUP-#REF Error



VLOOKUP with IFNA (Excel 2013+)

	A	B	C	D	E	F	G	H
1	VLOOKUP	March		Account #	Account Name	January	February	March
2	40100	0		40100	Product Sales	99,738	113,689	92,741
3	40100	#REF!		40200	Services	32,914	37,517	30,605
4				40300	Other Income	19,948	22,738	18,548
5				40400	Interest Income	2,992	5,684	3,710
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

IFNA returns #NAME? in Excel 2010 and earlier. In this case both formulas incorrectly refer to the 6th column of 5 column range.

=IFERROR(VLOOKUP(A2,D1:H5,6,0),0)

=IFNA(VLOOKUP(A3,D1:H5,6,0),0)

=IFNA(VLOOKUP(A3,\$D\$1:\$H\$5,6,0),0)

value
VLOOKUP(A3,\$D\$1:\$H\$5,6,0)
this formula is purposefully written incorrectly to trigger a #REF! error

value_if_na
0
what to display instead of #N/A. All other errors are shown.
Enclose text in quotes:
=IFNA(VLOOKUP(A3,D1:H5,5,0),"") or
=IFNA(VLOOKUP(A3,D1:H5,5,0),"MISSING")

VLOOKUP-IFNA



VLOOKUP Text vs. Numbers Causes #N/A

	A	B	C	D	E	F	G	H
1		March		Account #	Account Name	January		
2	40100	#N/A		40100	Product Sales	99,738		
3				40200		32,914	37,517	30,605
4	FALSE			40300	Other Income	19,948	22,738	18,548
5				40400			6,684	3,710

In this situation VLOOKUP returns #N/A even though account 40100 appears to be on the list.

=VLOOKUP(A2,D1:H5,5,0)

=A2=D2

=A2=D2 compares the two cells together and returns FALSE if both cells are not identical.

=LEN(A2)

=LEN(D2)

=ISNUMBER(A2)

=ISNUMBER(D2)

=LEN(A2)

=ISNUMBER(A2)

value A2

LEN returns the number of characters in a cell, and is useful for identifying trailing spaces.

value A2

ISNUMBER returns TRUE if the value is stored as a numeric value, otherwise it returns FALSE.

VLOOKUP-Numbers Stored as Text



VLOOKUP Resolving Text vs. Numbers

	D	E
1	Account #	Account Name
2	40100	Product Sales
3	40200	Services
4	40300	Other Income
5	40400	Interest Income

1 Select cells with numbers stored as text.

VLOOKUP-Numbers Stored as Text.xlsx - Excel

2 Data

3 Text to Columns

Convert Text to Columns Wizard

The Text Wizard has determined that the data in the selected cells is text. If this is correct, choose Next to convert the data.

Original data type: Text

Choose the file type that best describes the data:

☒ Delimited - Characters are separated by a specific character.

☐ Fixed width - Fields are of a specific width.

Preview of selected data:

```

2 40100
3 40200
4 40300
5 40400

```

4 Finish

	A	B	C	D	E
1		March		Account #	A
2	40100	92741		40100	Product Sales
3					
4	TRUE				
5	5				
6	5				
7	TRUE				
8	TRUE				
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

5 VLOOKUP returns a result now because cells A2 and D2 are now identical.

Formulas:
 =VLOOKUP(A2,D1:H5,5,0)
 =A2=D2
 =LEN(A2)
 =LEN(D2)
 =ISNUMBER(A2)
 =ISNUMBER(D2)



VLOOKUP with Wildcard Criteria

	A	B	C	D	E	F	G	
1		<u>March</u>		<u>Account</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>A</u>
2	40100	#N/A		40100 - Product Sales	99,738	113,689	92,741	10
3	40100	92,741		40200 - Services	32,914	37,517	30,605	3
4	Services	30,605		40300 - Other Income	19,948	22,738	18,548	2
5				40400 - Interest Income	2,992	5,684	3,710	
6				=VLOOKUP(A2,D1:G5,4,0)				
7				=VLOOKUP(A3&"*",D1:G5,4,0)				
8				=VLOOKUP("*"&A4,D1:G5,4,0)				
9								
10				=VLOOKUP(A3&"*",D1:G5,4,0)				
11								
12				lookup_value A3&"*" what to look for (in this case an item that starts with 40100) table_array D1:G5 cell coordinates of our list col_index_num 4 column to return data from range_lookup 0 0 or FALSE: Exact Match 1 or TRUE: Approximate Match				
13								
14								
15								

VLOOKUP-Wild Cards



MATCH Introduction

	A	B	C	D	E	F	G	H
1	MATCH	March		Account #	Account Name	January	February	March
2		5		40100	Product Sales	99,738	113,689	92,741
3				40200	Services	32,914	37,517	30,605
4				40300	Other Income	19,948	22,738	18,548
5				40400	Interest Income	2,992	5,684	3,710
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

=MATCH(B1,D1:Q1,0)

MATCH returns #N/A if the lookup_value cannot be found within the lookup_array.

=MATCH(B1,D1:Q1,0)

lookup_value B1 what to look for (in this case, March)	lookup_array D1:Q1 2 or more cells within a single row or column (in this case, cells D1:Q1)	match_type 0 type of match 1 = less than 0 = exact match -1 = greater than
--	--	---

MATCH-Introduction



VLOOKUP with MATCH

	A	B	C	D	E	F	G	H	
1	VLOOKUP	March		Account #	Account Name	January	February	March	
2	40100	92741		40100	Product Sales	99,738	113,689	92,741	10
3		5		40200	Services	32,914	37,517	30,605	3
4	40100	92,741		40300	Other Income	19,948	22,738	18,548	2
5				40400	Interest Income	2,992	5,684	3,710	

`=VLOOKUP(A2,D1:H5,5,0)`

`=MATCH(B$1,$D$1:$Q$1,0)`

`=VLOOKUP(A4,$D1:$Q5,MATCH(B1,$D$1:$Q$1,0),0)`

`=VLOOKUP(A4,$D$1:$Q$5,MATCH(B1,$D$1:$Q$1,0),0)`

lookup_value A4 what to look for (in this case, account 40100)	table_array \$D\$1:\$Q\$5 cell coordinates of our list.	col_index_num MATCH(B1,\$D\$1:\$Q\$1,0) column from which to return data B1 - what to look for D1:Q1 - where to look 0 (zero) - exact match	[range_lookup] 0 type of match 0 or FALSE: exact match 1 or TRUE: approximate match
--	--	--	---

VLOOKUP with MATCH



VLOOKUP with Table Feature

1 Select any cell within your list.

5 Design

6 Optional: assign a meaningful name in place of Table1 (no spaces allowed, first character must be a letter)

2 Table

3 Where is the data for your table?
=DS\$1:SQ\$5

4 OK

Optional: Table name simplifies formula, table automatically encompasses new data.
=VLOOKUP(A2,D1:H5,5,0) is acceptable as well.

7 Optional: Table name simplifies formula, table automatically encompasses new data.
=VLOOKUP(A2,D1:H5,5,0) is acceptable as well.



Undoing the Table Feature

1 **Table Design**

2 [Dropdown arrow]

3 [None]

4 The formatting is removed but the list is still a table.

5 Choose Convert to Range from the Table Design menu.

6 Yes

7 The list is now a regular range of cells with no special characteristics. Any formulas that refer to a former table must be manually edited going forward to include new rows of data.

Account #	Account Name	January	February	March	April
40100	Product Sales	99,738	113,689	92,741	109,467
40200	Services	32,914	37,517	30,605	36,124
40300		22,738	18,548	21,893	
40400	Inter	5,684	3,710	3,284	



INDEX/MATCH Introduction

	A	B	C	D	E	F	G	H	I
1		March		Account #	Account Name	Jan	Feb	Mar	Apr
2	40100	92,741		40100	Product Sales	99,738	113,689	92,741	109,4
3	40100		2	40200	Services	32,914	37,517	30,605	36,1
4	40100	92,741		40300	Other Income	19,948	22,738	18,548	21,8
5				40400	Interest Income	2,992	5,684	3,710	3,2
6	Unlike VLOOKUP, MATCH/INDEX can return data from the left or right of a lookup column.			=VLOOKUP(A2,D1:H5,5,0)					
7				=MATCH(A3,D1:D5,0)					
8				=INDEX(\$H\$1:\$H\$5,MATCH(A4,\$D\$1:\$D\$5,0))					
9				=INDEX(\$H\$1:\$H\$5,MATCH(A4,\$D\$1:\$D\$5,0))					
10									
11									
12									
13									
14									
15									

array
\$H\$1:\$H\$5
where to look

row_num
MATCH(A2,\$D\$1:\$D\$5,0)
 row number
*(in this case, MATCH tells INDEX
 what cell in column H from which
 to return a value)*

[column_num]

 optional: omitted in this case,
 because our lookup is based
 on a single column

MATCH-INDEX Introduction



XLOOKUP Introduction (Microsoft 365)

	A	B	C	D	E	F	G	H	I
1		<u>March</u>		<u>Account #</u>	<u>Account Name</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>
2	40100	92,741		40100	Product Sales	99,738	113,689	92,741	109,467
3	40100	92,741		40200	Services	32,914	37,517	30,605	36,124
4				40300	Other Income	19,948	22,738	18,548	21,893
5				40400	Interest Income	2,992	5,684	3,710	3,284
6				=VLOOKUP(A2,D1:H5,5,0)					
7				=XLOOKUP(A3,D1:D5,H1:H5)					
8									
9									
10				=XLOOKUPA3,D1:D5,H1:H5)					
11									
12				lookup_value		lookup_array		return_array	
13				A3		D1:D5		H1:H5	
14				what to look for		cell coordinates		cell coordinates of	
15				(in this case, account 40100)		where to look		what to return	

XLOOKUP-Introduction



XLOOKUP If_Not_Found argument

	A	B	C	D	E	F	G	H		
1		March		Account #	Account Name	January	February	March		
2	40500	0		40100	Product Sales	99,738	113,689	92,741		
3	40500			40200	Services	32,914	37,517	30,605		
4	40500			40300	Other Income	19,948	22,738	18,548		
5				40400	Interest Income	2,992	5,684	3,710		
6				=IFERROR(VLOOKUP(A3,\$D\$1:\$H\$5,5,0),0)						
7				=IFNA(VLOOKUP(A3,\$D\$1:\$H\$5,5,0),0)						
8				=XLOOKUP(A4,\$D\$1:\$D\$5,\$H\$1:\$H\$5,0)						
9										
10										
11				lookup_value	lookup_array	return_array	[if_not_found]			
12				A4	\$D\$1:\$D\$5	\$H\$1:\$H\$5	0			
13				what to look for	cell	cell	optional alternate value to display instead of #N/A if the lookup_value is not found, obviating IFERROR and IFNA.			
14				(in this case, account 40100)	coordinates where to look	coordinates of what to return				
15				XLOOKUP-If_Not_Found argument						



XLOOKUP Can Return Multiple Columns

	A	B	C	D	E	F	G	H	I
1	Account #	Account Name	January	February	March	April	May	June	July
2	40100	Product Sales	99,738	113,689	92,741	109,467	90,962	102,946	111,211
3	40200	Services	32,914	37,517	30,605	36,124	30,017	33,972	36,700
4	40300	Other Income	19,948	22,738	18,548	21,893	18,192	20,589	22,242
5	40400	Interest Income	2,992	5,684	3,710	3,284	5,458	3,088	4,448
7		January	February	March					
8	40100	99,738	113,689	92,741					
9	40100	99,738	113,689	92,741					

=VLOOKUP(\$A9,\$A\$1:\$E\$5,3,FALSE)
 =VLOOKUP(\$A9,\$A\$1:\$E\$5,4,FALSE)
 =VLOOKUP(\$A8,\$A\$1:\$E\$5,5,FALSE)
 =XLOOKUP(A9,A1:A5,C1:E5)

=XLOOKUP(A9,A1:A5,C1:E5)

lookup_value A9 what to look for <i>(in this case, account 40100)</i>	lookup_array A1:A5 cell coordinates where to look	return_array C1:E5 cell coordinates of what to return, in this case 3 columns instead of 1
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XLOOKUP-Multiple Results



XLOOKUP Finding the Last Match

	A	B	C	D	E	F	G	H
1	Product	Total Sales						
2	Oranges	61,680		Oranges	61680	=XLOOKUP(D2,A:A,B:B) =XLOOKUP(D3,A:A,B:B,-1)		
3	Apples	85,106		Oranges	93816			
4	Kiwi	66,638						
5	Bananas	75,548						
6	Mixed Berries	29,940						
7	Oranges	93,816						
8	Apples	21,910						
9	Kiwi	99,670						

=XLOOKUP(D3,A:A,B:B,-1)					
lookup_value D3 what to look for (in this case, Oranges)	lookup_array A:A cell coordinates where to look or column reference	return_array B:B cell coordinates of what to return or column reference	[if_not_found] optional alternate value to display instead of #N/A if the lookup_value is not found	[match_mode] type of match 0: exact match -1: exact match or next smaller item 1: exact match or next larger item	[search_mode] -1 type of search 1: search first to last -1: search last to first 2: binary search (ascend) -2: binary search (descend)

XLOOKUP-Search Last to First	+
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SUMIF Introduction

	A	B	C	D	E	F	G	H	
1		<u>March</u>		<u>Account #</u>	<u>Account Name</u>	<u>January</u>	<u>February</u>	<u>March</u>	
2	40200	30,605		40100	Product Sales	99,738	113,689	92,741	1
3	40200	49,153		40200	Services	32,914	37,517	30,605	
4				40200	Services	19,948	22,738	18,548	
5				40400	Interest Income	2,992	5,684	3,710	
6	Unlike VLOOKUP which returns #N/A, SUMIF returns 0 if it doesn't find a match.			=VLOOKUP(A2,D1:H5,5,0)					
7	SUMIF returns #VALUE! if you to link to another workbook that isn't presently open in Excel.			=SUMIF(D1:D5,A3,H1:H5)					
8									
9									
10									
11	=SUMIF(D1:D5,A3,H1:H5)								
12	range D1:D5 where to look			criteria A3 what to look for (in this case, account 40200)			sum_range H1:H5 the cells to sum		
13									
14									

SUMIF Introduction





SUMIFS Function with One Range Criteria

	A	B	C	D	E	F	G	H	I
1	<u>Account</u>	<u>March</u>		<u>Account #</u>	<u>Account Name</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>
2	40200	52,862		40100	Product Sales	99,738	113,689	92,741	109,738
3	40200	52,862		40200	Services	32,914	37,517	30,605	36,517
4				40300	Other Income	19,948	22,738	18,548	21,948
5				40400	Interest Income	2,992	5,684	3,710	3,710
6				=SUMIF(D1:D5,">="&A2,H1:H5)					
7				=SUMIFS(H1:H5,D1:D5,">="&A3)					
8									
9									
10				=SUMIFS(H1:H5,D1:D5,">="&A3)					
11									
12									
13									
14									
15									

sum_range
H1:H5
what to add up
(in this case, column I)

criteria_range1
D1:D5
where to look for 1st criteria
of up to 127 criteria
(in this case, column D)

criteria1
">="&A3
1st of up to 127 criteria
(in this case, anything ≥ to
account 40200)

SUMIFS With Range Criteria



SUMIFS with Two Range Criteria

	A	B	C	D	E	F	G	H	I
1	Start	End	March		Account #	Account Name	January	February	March
2	40200		49,153		40100	Product Sales	99,738	113,689	92,741
3	40100	40300	141,894		40200	Services	32,914	37,517	30,605
4					40200	Other Income	19,948	22,738	18,548
5					40400	Interest Income	2,992	5,684	3,710

SUMIFS allows for up to 127 criteria pairs, and returns 0 if it doesn't find a match.

SUMIFS returns #VALUE! your formula links to another workbook that isn't currently open in Excel.

=SUMIFS(I2:I5,E2:E5,A2)

=SUMIFS(I2:I5,E2:E5,">="&A3,E2:E5,"<="&B3)

=SUMIFS(I1:I5,E1:E5,">="&A3,E1:E5,"<="&B3)

sum_range I1:I5 what to add up	criteria_range1 E1:E5 where to look for first of up to 127 criteria	criteria1 ">="&A3 first of up to 127 criteria	criteria_range2 E1:E5 where to look for second of up to 127 criteria	criteria2 "<="&B3 second of up to 127 criteria
---	--	--	---	---

SUMIFS with Two Range Criteria



SUMPRODUCT as SUMIFS Alternative

	A	B	C	D	E	F	G	H	I					
1	Start	End	March		Account #	Account Name	January	February	March					
2	40200	40300	49,153		40100	Product Sales	99,738	113,689	92,741					
3	40200	40300	49,153		40200	Services	32,914	37,517	30,605					
4					40300	Other Income	19,948	22,738	18,548					
5					40400	Interest Income	2,992	5,684	3,710					
6					=SUMIFS(I:I,E:E,">="&A2,E:E,"<="&B2)									
7					=SUMPRODUCT((E2:E5>=A3)*(E2:E5<=B3)*I2:I5)									
8	SUMPRODUCT returns #VALUE! if any text is within your range to sum.				You can provide up to 255 arguments with SUMPRODUCT as opposed to 127 with SUMIFS. SUMPRODUCT allows you to link to data in closed workbooks while SUMIFS does not.									
9														
10														
11	=SUMPRODUCT((E2:E5>=A3)*(E2:E5<=B3)*I2:I5)													
12														
13	[array1]				[array2]			[array3]						
14	(E2:E5>=A3)				(E2:E5<=B3)			I1:I5						
15	In this case where an account number in cell E2:E5 is greater than or equal to the number in cell A3				In this case where an account number in cell E2:E5 is less than or equal to the number in cell B3			Cells that contain values we want to sum when both						
16														

SUMPRODUCT-Multicriteria Lookup

SUMPRODUCT-Multicriteria Lookup



Thank you for attending!

I'm happy to hear from you. In particular let me know if you did not receive the handouts for this presentation.

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Is there something you were hoping to learn today but didn't?
Please let me know. You can ask me anything about Excel.